PORTFOLIO 3

STUDENT SUBMISSION

Student Name: Add your name here Student ID: Add number here

Stream: Add Year and Semester

Submit this document by the due date to Moodle when you have completed it.

Drain-laying and Trenching

**Introduction**

This course covers the general practical and theoretical knowledge of the principles related trenching, drain laying and work readiness. For this assessment a worksite job scenario has been used

**Learning Outcomes:**

By the end of this course the student will be able to:

1. Plan a confined space entry
2. Investigate legislative requirements for Drainlaying
3. Excavate, shore and back-fill a trench
4. Identify and install drainage pipework and components
5. Apply work-readiness capabilities

Completion of this document showing the following.

* Excavation, shoring and back-filling a trench
* Installing basic house drain
* Itemised product, materials and cost spreadsheet for the customer (quote).
* List of equipment and tools.

**Learning Outcome 1:**

1. Plan a confined space entry.

This unit standard is delivered by an external provider.

**Learning Outcome 2:**

Investigate related legislative requirements

G13: Requires the safe supply, storage, reticulation and delivery of hot and cold water.

In the table below provide a reference from the G12 document that relates to the following situations. Explain why this is important.

|  |  |  |
| --- | --- | --- |
| Situation | Building Code Reference | Why is this important? |
| To prevent overflow |  |  |
| To prevent the ingress of surface water |  |  |
| When should we vent a main drain |  |  |

**Learning Outcome 3 :**

Excavate, shore and back-fill a trench.

|  |  |
| --- | --- |
| Shoring, Trenching and Backfilling | |
| Tools Required:   * Add to this list | Fittings and Fixtures Required:   * Add to this list |
| PROCEDURE | |
| Step:   1. What needs to be prepared for this job 2. Add to your procedural list here | |
| LEGISLATION | |
| 1. Reference any legislation that relates to this job or the environment the appliance / fitting is located in. 2. Add to list here 3. Add to list here | |
|  | |
|  | |
|  | |
| CALCULATIONS | |
| Add an image of any calculations you did here or write them in.  This must include gradient / fall calculations. | |
| **List Regulations and standards that relate to this job:**  **1.**  **2.**  **3.** | |

**HEALTH AND SAFETY RISK ASSESSMENT**

Complete the following form for this job as a hard copy and get your Tutor to sign it. Add a quality photo or photocopy of your completed form in the space below.

HEALTH AND SAFETY RISK ASSESSMENT FORM

**ACTIVITY: Drainlaying**

|  |  |  |  |
| --- | --- | --- | --- |
| **IDENTIFY RISKS: Highlight / tick those that apply** | | | |
| Tick the potential risks(s) for this activity: | | | |
| * Slips, trips and falls | * Heavy items that could fall | * Sharp objects or tools | * Electrical equipment (incl. power tools) |
| * Gas equipment | * Machinery (moving parts) | * Machinery (sparks) | * Hand tools |
| * Toxic fumes and dust | * Poisonous chemicals | * Flammable substances | * Excessive noise |
| * Ladders (heights) | * Temperature | * Fatigue | * Flames |
| List any other risks:  Add text here | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **RISK CONTROL METHOD:** | | | |
| Write what you will do to eliminate or minimise each risk: | | | |
| **RISK:** | **WHAT MIGHT HAPPEN:** | **HOW YOU WILL ELIMINATE:** | **HOW YOU WILL MINIMISE:** |
|  |  |  |  |
|  |  |  |  |
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|  |  |  |  |
| --- | --- | --- | --- |
| **PERSONAL PROTECTIVE EQUIPMENT (PPE):** | | | |
| Tick the personal protective equipment (PPE) needed to complete this activity: | | | |
| * Footwear | * Overalls | * Safety glasses | * Safety gloves |
| * Welding mask | * Earmuffs / earplugs | * Hard hat | * Hi-vis vest |
| List any other personal protective equipment (PPE) required:  Add text here | | | |

Add text here

Write or draw about what you plan to do to complete this activity.

**PLANNING:**

|  |  |  |  |
| --- | --- | --- | --- |
| **TUTOR SIGNATURE:** |  | **DATE:** |  |

Photographic Evidence of the Shoring, Trenching and Backfilling Process

|  |  |
| --- | --- |
| Step 1 | Step 2 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 3 | Step 4 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 5 | Step 6 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |

Identify and label the tools, fittings and fixtures used in drain-laying

|  |  |
| --- | --- |
|  |  |
| Description | Description |
|  |  |
| Description | Description |
|  |  |
| Description | Description |
|  |  |
| Description | Description |
|  |  |
| Description | Description |

Learning Outcome 4:

**Planning and laying of house drain.**

From the fittings and the drawings below you can plan your house drain.



Diagram, engineering drawing

Description automatically generated

Photographic Evidence of the House drain Install

|  |  |
| --- | --- |
| Camera with solid fill | Camera with solid fill |
| Explain what is happening in this picture | Explain what is happening in this picture. |
| Camera with solid fill | Camera with solid fill |
| Explain what is happening in this picture. | Explain what is happening in this picture. |
| Camera with solid fill | Camera with solid fill |
| Explain what is happening in this picture. | Explain what is happening in this picture. |
| Camera with solid fill | |
| Explain what is happening in this picture. | |

Calculate how much you think this job will cost? This total can be shared with the client to give them an idea of how much it will cost them.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item description | SKU | Cost / item | # Req | Total cost |
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|  |  |  |  |  |
|  |  | Grand total | |  |

Learning Outcome 5:

**Apply work-readiness capabilities**

Add a signed (Tutor) and verified (Manager) copy of the Work readiness Tutor Sign off sheet here.